



BSI Standards Publication

Exchanging course related information

Part 1: Course advertising profile

– Specification

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Documents

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 October 2012. It was prepared by Panel IST/43/-/8, *UK adoption and of EN 15981 (EuroLMAI), EN 15943 (CEF) and EN 15982 (MLO)*, under the authority of Technical Committee IST/43, *Information technology for learning, education and training*. A list of organizations represented on this committee can be obtained on request to its secretary.

Relationship with other publications

BS 8581-2 provides guidance and recommendations on how and when the elements and attributes described in BS 8581-1 are to be used.

BS 8581-1 describes the structure of an XCRI-CAP1.2 XML document that conforms to BS EN 15982.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

0 Introduction

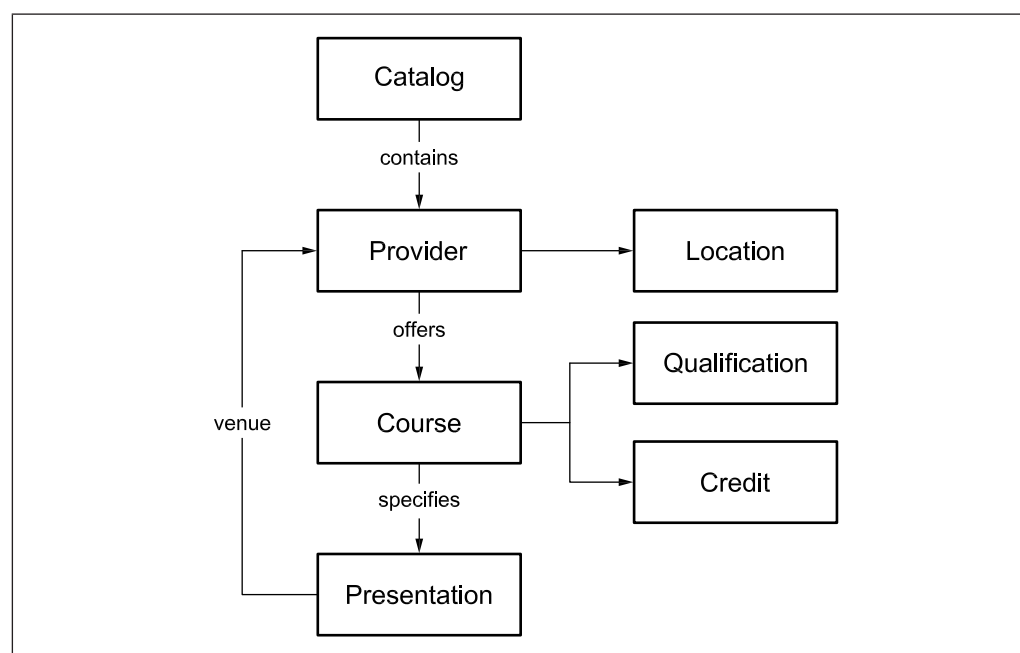
The Exchanging Course Related Information (XCRI) Course Advertising Profile (XCRI-CAP) provides an XML description that enables the interoperability of course descriptions or learning opportunities between the course provider and any number of aggregators.

XCRI-CAP documents provide an XML format based on BS EN 15982, which means documents that conform to this British Standard have the same underlying semantics as those produced to other bindings of BS EN 15982.

XCRI-CAP documents typically consist of a top-level <catalog> element, encapsulating <provider> elements, for the entities providing courses and <course> elements for the descriptions for the courses offered. Each course has descriptive information available, e.g. topic, syllabus, obtainable qualification, career options. The course is also divided into any number of <presentation>s, which are the “instances” or “offerings” of the course that a prospective student applies for, which have specific start and end dates, locations, etc., that can vary in location and mode of study, e.g. a full time and part time presentation, with different durations and start dates.

Figure 1 details the main elements of this British Standard.

Figure 1 Overview of the information model



1 Scope

This British Standard specifies requirements for applications that produce and aggregate XCRI-CAP documents.

It is intended for use by producers and aggregators in the dissemination of course information to prospective students.

This British Standard specifies requirements for:

- policy-makers prescribing a consistent approach for product advertisement that conforms to BS EN 15982 to learning opportunity providers;
- decision-makers specifying or procuring software for advertising or aggregating information about learning opportunities in a format that conforms to BS EN 15982; and
- software developers writing code for advertising or aggregating information about learning opportunities in a format that conforms to BS EN 15982.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

BS EN 15982, *Metadata for learning opportunities (MLO) – Advertising*

BS ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*

BS ISO 15836:2009, *Information and documentation – The Dublin Core metadata element set*

Other publications

[N1] INTERNET ENGINEERING TASK FORCE (IETF). *RFC 3986: Uniform resource identifier (URI) – Generic syntax* [viewed 2012-07-12]. Available from <<http://tools.ietf.org/html/rfc3986>>

[N2] DUBLIN CORE METADATA INITIATIVE. *DCMI terms* [viewed 2012-07-12]. Available from <<http://dublincore.org/documents/dcmi-terms>>

[N3] DUBLIN CORE METADATA INITIATIVE. *Dublin Core Metadata Element Set*, version 1.1 [viewed 2012-07-12]. Available from <<http://dublincore.org/documents/2012/06/14/dcmi-terms/?v=elements>>

[N4] INTERNET ENGINEERING TASK FORCE (IETF). *RFC 2822: Internet message format* [viewed 2012-07-16]. Available from <<http://www.ietf.org/rfc/rfc2822.txt>>

[N5] INTERNET ENGINEERING TASK FORCE (IETF). *RFC 1738: Uniform resource locators (URL)* [viewed 2012-07-17]. Available from <<http://www.ietf.org/rfc/rfc1738.txt>>

[N6] EUROPEAN COMMITTEE FOR STANDARDIZATION. *CEN workshop agreement (CWA) 16077: Educational credit information model* [viewed 2012-07-12]. CEN:2010. Available from <<ftp://ftp.cen.eu/cen/Sectors/TCandWorkshops/Workshops/CWA16077.pdf>>

[N7] INTERNET ENGINEERING TASK FORCE (IETF). *BCP47: Tags for identifying languages* [viewed 2012-07-12]. Available from <<http://tools.ietf.org/rfc/bcp/bcp47.txt>>

[N8] W3C. *Date and time formats* [viewed 2012-07-12]. Available from <<http://www.w3.org/TR/NOTE-datetime>>

3 Terms and definitions

For the purposes of this part of BS 8581, the terms and definitions from BS EN 15982 and the following apply.

3.1 attribute

name/value pair that exists within an element of an XML document

NOTE 1 Attributes are denoted in the text by the use of an "@" prefix, e.g. "@identifier".

NOTE 2 Attention is drawn to the W3C website: <http://www.w3.org/TR/REC-xml/>, for further information about XML documents.

3.2 element

logical component of an XML document

NOTE 1 Elements are denoted in the text by the use of angle brackets, e.g. "<provider>".

NOTE 2 Attention is drawn to the W3C website: <http://www.w3.org/TR/REC-xml/>, for further information about XML documents.

3.3 namespace

mechanism for providing uniquely named elements and attributes in an XML document

NOTE 1 Each namespace is identified using a namespace name, typically expressed as a URI, see [N1].

NOTE 2 Attention is drawn to the W3C website: <http://www.w3.org/TR/xml-names/>, for further information about namespaces in XML.

3.4 resource

anything that might be identified

[BS ISO 15836:2009, 3.1.1]

3.5 URL

uniform resource locator conforming to IETF RFC 3986 [N1]

4 Conformance

COMMENTARY ON CLAUSE 4

There are two classes of application that can conform to this British Standard: a producer and an aggregator.

A producer is a class of application that produces XCRI-CAP documents. An aggregator is a class of application that aggregates XCRI-CAP documents.

Either or both classes can conform to this British Standard.

A **strictly conforming instance** shall be a set of structured information constituted only of elements and attributes and fully qualified refinements of the elements, as defined in this British Standard.

A **fully qualified refinement** is an element that explicitly extends an element defined by this British Standard. A fully qualified refinement shall be capable of being processed according to the semantics of the element it extends.

A **conforming instance** may contain additional elements and attributes not defined by this British Standard.

A **conforming producer** shall be capable of generating and sharing strictly conforming instances.

A **conforming aggregator** shall be capable of processing strictly conforming instances.

5 XCRI-CAP documents

The producer shall create XCRI-CAP documents that are valid XML documents.

The producer shall create XCRI-CAP documents with one of the following elements as its top-level element:

catalog;

provider; or

course.

The aggregator shall be able to process a valid XCRI-CAP document.

NOTE Both provider and course are allowed as alternative top-level elements to enable REST-style operations to be supported.

6 Namespace

Elements and attributes shall be identified using the namespace:

<http://purl.org/xcri/cap>

Elements defined by BS EN 15982 shall use the namespace: <http://purl.org/net/mlo>

Elements defined by BS ISO 15836 and DCMI terms [N2] shall use the namespace: <http://purl.org/dc/terms/>

NOTE 1 Information on namespace can also be found at <http://www.xcri.co.uk/h2-info-models.html>.

NOTE 2 This British Standard also includes elements defined in other standards, specifically BS EN 15982, BS ISO 15836 and DCMI terms [N2].

7 Core elements

7.1 <catalog> element

URI: <http://purl.org/xcri/cap#catalog>

The <catalog> element shall be the default root element for a feed.

NOTE 1 The catalog element does not imply a relationship between this British Standard and a course catalog. A catalog does not necessarily relate to a concept of a catalog in an originating or consuming system, but rather provides the context for the content of this British Standard.

The <catalog> element shall contain exactly one @generated attribute.

The value of the @generated attribute shall be the date and time at which the catalog content is generated in BS ISO 8601 format.

The catalog element shall contain common elements in accordance with Clause 8.

The catalog element shall contain any number of <provider> elements as defined in 7.2.

NOTE 2 URI stands for uniform resource identifier.